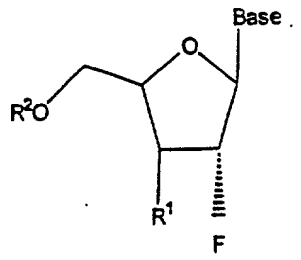
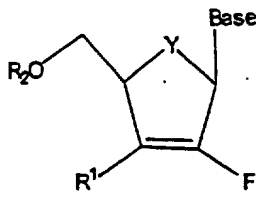
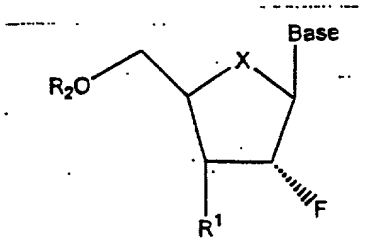
ABSTRACT

A class of 2'-fluoro-nucleoside compounds are disclosed which are useful in the treatment of hepatitis B infection, hepatitis C infection, HIV and abnormal cellular proliferation, including tumors and cancer. The compounds have the general formulae:

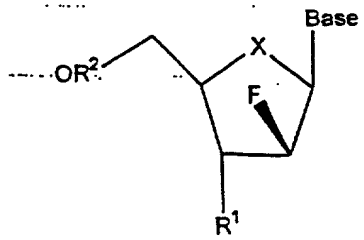




Y=O, S, CH_2, CHF



X= S, CH_2



X=S, CH_2

wherein

Base is a purine or pyrimidine base;

R^1 is OH, H, OR^3, N_3, CN, halogen, including F, or CF_3, lower alkyl, amino, loweralkylamino, di(lower)alkylamino, or alkoxy, and base refers to a purine or pyrimidine base;

R^2 is H, phosphate, including monophosphate, diphosphate, triphosphate, or a stabilized phosphate prodrug; acyl, or other pharmaceutically acceptable leaving group which when administered *in vivo*, is capable of providing a compound wherein R^2 is H or phosphate; sulfonate ester including alkyl or arylalkyl sulfonyl including methanesulfonyl, benzyl, wherein the phenyl group is optionally substituted with one or more substituents as described in the definition of aryl given above, a lipid, an amino acid, peptide, or cholesterol; and

R^3 is acyl, alkyl, phosphate, or other pharmaceutically acceptable leaving group which when administered *in vivo*, is capable of being cleaved to the parent compound, or a pharmaceutically acceptable salt thereof.